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**ON THE DOCTRINE OF METAMORPHOSIS.**

By **Hermann Hoffmann, M.D.**, Lecturer on the Principles of Physiology in the University of Giessen.

IN consequence of the extraordinary deficiency of accurate data with reference to all those circumstances which relate to the doctrine of metamorphosis (one of the most important in physiology), it appears desirable that every one should assist according to his ability in obtaining some firm principles on which new researches as well as new theories might be founded. We possess, indeed, some observations upon the daily consumption of matter in the human frame; and even if these do not agree very well with one another, still they prove almost to demonstration, that by instituting a greater number of experiments, a satisfactory result will soon crown our efforts. As the consumption of a human being in the condition of customary quiet life has in this manner been ascertained to a certain extent, it appeared to me interesting to make some experiments in order to show the amount of consumption in a condition of considerable increased activity. The practical object of these experiments was, however, to substitute a definite idea, for the vague expressions, fatigue, exertion, exercise, &c.

In the beginning of November, 1842, I undertook a journey on foot to a town twelve leagues distant. The weather was damp, cold ( $\times 40$  deg. R.), and in the beginning of my journey a light snow fell; in the afternoon, however, it cleared up. After walking three leagues\* I was weighed, for which purpose my clothes were taken off, to avoid any error from their probable dampness. The total weight amounted to 124 pounds 6 ounces. The experiment now began. Without halting or putting up anywhere for the remaining nine leagues, I proceeded on my journey. This was by no means too great an exertion, as the road was excellent, and only rendered slightly fatiguing by gentle hills. Besides, the coolness of the weather had a sensibly beneficial influence on the sensation of strength. The quantity of nourishment taken was accurately weighed, and moreover as little, and that of as simple a quality as possible, was eaten, namely, wheat bread, altogether 9 ounces, 120 grains. No fluid was drunk during the whole time, and from the state of the weather this

\* The Hessian league or stund=2 1-2 English miles.

was not attended by any material inconvenience. Defecation did not take place during the experiment; sensible perspiration also did not occur, a circumstance easily explained by the state of the atmosphere. The nasal mucus was carefully collected in a pocket handkerchief, the weight of which had been previously determined when dry, and was again weighed at the conclusion of the experiment. The increase of weight amounted to one loth,\* eighty grains. The urine was received into a vessel, the capacity of which was afterwards determined by urine of similar concentration, and the number of vessels thus filled was registered. The weight amounted to one pound, one loth, sixty grains. The first weighing took place at 8 o'clock in the morning; the experiment terminated at 5 in the afternoon, and the weight amounted to 122 pounds, 13 ounces and 28 grains. From the above data it will be seen that the actual loss of weight is greater than that accounted for by the amount of urine and nasal mucus, the difference arising clearly from the loss by exhalation from the skin and respiratory organs.

I embrace this opportunity for inquiring into another point immediately connected with the above. The question presents itself, how far a renewal of strength can be supplied during its consumption; or, in other words, how far can repose take place without rest? Are rest, sitting, lying, in point of fact so absolutely essential for the renewal of strength as is usually supposed, or is this rule subject to limitations; and if so, what are the conditions under which the exception occurs? The influence of taking food is here also decidedly confirmed. After three hours' walking, immediately after the first weighing a wheaten roll was eaten, which in a short time satisfied the hunger which had been keenly excited by the exercise. After, however, I had proceeded on the whole about six leagues, loss of strength and spirits occurred to such a degree that I hesitated considerably as to the prosecution of the experiment. My companion, a dog, which very perceptibly lost his cheerfulness in proportion as the hungry march was pursued, found himself in the same situation, only much less subject to intentional deception, of which, however, one is totally incapable under such circumstances. Nothing could be more remarkable than the effect which was now produced on man and dog by some ounces of bread. In less than a quarter of an hour I felt myself in a totally different state of mind, and did not for a moment doubt of the success of my undertaking. The dog, likewise, acquired so much cheerfulness and strength, that he appeared as if he had only just commenced the journey.

Precisely the same result was repeated towards the end of the experiment, only that the dog recovered himself more completely, as he was quite as cheerful at the conclusion as at the beginning of the journey—a remark not so applicable to myself.

I felt some interest in observing the nature of the origin of the local fatigue, after I had in the manner above mentioned arrived at some conclusions respecting the general lassitude. The experiment was so arranged as to include an extreme case, that of the motion of walking continued as long as possible. Numerous experiments have in this respect com-

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\* A loth—half an ounce.

pletely confirmed the opinions of the Webers on the oscillation of the pendulum. A sensation of fatigue in the fascia lata, and in the thigh generally, the first and most distressing symptoms in persons unaccustomed to walking, remained from the beginning to the end of the experiment. The first was a kind of general stiffness, produced by the continuous uniformity of the motion, the consequence of which was, that motion sideways, &c., was difficult and fatiguing. About 1 o'clock a contracted sensation was felt in the femoral insection of the gastrocnemii of both legs, which gradually increased and was rather distressing. The popliteus, and especially the left, participated in this sensation. After a march of ten leagues, a strained sensation, painful even in stooping, was experienced on both sides of the spinal column, at the iliac insertions of the sacro-lumbalis muscles, and which was very troublesome, manifestly in consequence of the exertion of these muscles in keeping the body in the upright, though somewhat bentforwards, position, which was obliged to be constantly preserved. I did not remark any other sensation of much interest, yet I must observe that towards evening an insupportable chilliness overcame me, which certainly was not attributable to the atmosphere, as it remained unchanged, nor to the clothing, as this was the same as in the morning. I was, however, quite well, with the exception of hunger, and I consider this as the cause of the chilliness.

The changes in the circulation and respiration which I experienced in the course of the journey, under similar circumstances, were remarkable. While I usually breathe 13 times per minute at 11 o'clock, I found in this case the number of inspirations and expirations amount to 19 at half past 10; at half past 1, 23; at 5, P. M., 22. The pulse, which in the normal state usually gives 80 beats per minute, numbered 105 at half past 10; at half past 1, 119; and at 5, 122. I took the precaution of standing still for 3 minutes before counting the pulse, and then registered the average of from 4 to 6 minutes. Notwithstanding this violent fever, I experienced no heat, and remark expressly, that the cause of this increase in the heart's action, &c., was not the ascent of the hills. At 11, P. M., after supper, the pulse was at 88, and the number of respirations 17. The urine which was passed in the evening soon after the experiment, deposited a considerable quantity of urate of ammonia, a circumstance very unusual in this place. Should I attribute this to a quantity of wine taken previously, or to the walking? It appears from what I am about to communicate, that the first supposition is the more correct.

For greater security, I repeated this experiment with my friend Mr. Sullivan. The temperature and weather were almost precisely the same as in the former case; the air, however, was somewhat drier. The experiment took place at the beginning of December, 1842. The journey extended to ten leagues, which we divided by an interval of one hour's rest.

My weight at the commencement, about 8, A. M., amounted to 121 pounds, 12½ ounces. The food, including a pint of light French red wine, weighed 1 pound, 1 ounce. The loss of urine amounted to 1 pound, 4 ounces: the mode of measurement was the same as in the former case; that is to say, the last portion emptied in the evening was directly weighed,

and the weight found taken as the medium standard. The nasal mucus might be estimated the same as in the former experiment, 320 grains. Defecation did not take place. As the weight at 8, P. M., at the conclusion of the experiment, amounted to 120 pounds, 10½ ounces, the additional loss of 14 ounces, 284 grains, must be considered as the result of perspiration. At 11, A. M., the number of inspirations and expirations was 16; at 8, P. M., more than 14; the pulse at 2, P. M., gave 85 beats; at 8, P. M., 95. Before the numbers were registered, longer pauses of rest were taken than in the first experiment, which may even be observed from the calculation, particularly in that of the evening. If, now, a man weighing 115 pounds perspires, during motion, 14 ounces, 164 grains, in eleven hours, this amounts to 0.49,880 of a grain to every 100 of his weight, or 0.075,584 of a grain for every 100 minutes.

My companion weighed 140 pounds, 6 ounces, 120 grains, at the beginning of the experiment. The food, as above, amounted to 1 pound, 1 ounce. The quantity of urine determined, as in the above case, amounted to 2 pounds, 1 ounce, 54 grains; the nasal mucus was assumed, with every appearance of correctness, to weigh 320 grains. Defecation did not take place. As now, the weight in the evening, at 8 o'clock, amounted to 137 pounds, 12 ounces, 180 grains; this gives a remainder of 1 pound, 6 ounces, 136 grains, which must be attributed to the perspiration.

The pulse, which usually beat only 64 times per minute, had increased to 70 at 2, P. M., and at 8, P. M., after some rest, still remained at 70. The number of respirations, usually amounting in the morning to 13½, increased at 11, A. M., to 16, and at 8, P. M., to 19. Thus, the 134 pounds, which Sullivan weighed, reduced to 100 grains and 100 minutes, gives 0.1575 of a grain of perspiration.

The urine, as in all the other cases mentioned, was very saturated, of a bright orange color, and deposited no sediment within 24 hours; it therefore did not contain any remarkable amount of urate of ammonia.

For the purpose of having a standard of comparison, I some time afterwards made the following observations on myself, respecting the consumption in a state of rest. Selecting for the purpose a day in which the temperature and hygroscopic condition of the atmosphere were similar to the above, I kept constantly in my room at a temperature of 13 R.; for the weighing merely, I stepped out a few hundred paces. The day was employed in study, half of the time standing, half sitting. The first weighing took place at half past 8, and amounted to 123 pounds, 8 ounces; nothing was taken either for nourishment or drink. The loss in urine was 1 pound, 20 grains. The second weighing, at 4 o'clock, gave 122 pounds, 7 ounces. Defecation did not take place, and the nasal secretion was considered=0: the perspiration here, then, amounted to only 4 ounces, 120 grains; the urine was also much lighter than in the other cases.

The respiratory action at 11, A. M., was 13, at half past 4, 14; the pulse at 11, A. M., was at 80, at half past 4, P. M., 80. If we calculate this as above, we have for the 115 pounds, in 100 minutes, 0.14,529 grains; for 100 grains, however, in the same interval, 0.030,272 grains of perspiration.

We may sum up the results as follows, comparing the amount of perspiration secreted in 100 minutes with 100 grains of the body.

Amount of perspiration in a man at rest for each 100 grains, during a space of 100 minutes=0.030,272 grains (Hoffman)

=0.1138 (Dalton\*)

=0.1581 (Lavoisier and Seguin†)

Amount of perspiration in a man in motion, reduced to the same standard of time and weight— 1. 2.

=5.10119 grains 0.075584 grains (Hoffman)

=0.1575 (Sullivan)

I have analyzed the urine passed after the second experiment, without having taken food for some hours previously.

In 1000 parts, the water=977,221

Solid matter= 22,779

1000 parts of the solid matter gave

Ash=536,806

Sulphuric acid= 80,581

For the purpose of determining the quantity of sulphuric acid, the ash was dissolved in water containing nitric acid, and the sulphuric acid precipitated by means of muriate of barytes. The sulphate of barytes was now exposed to a red heat, and the acid thus calculated. This urine deposited no sediment.—*London Med. Gaz.*

#### ON PLASTIC OPERATIONS.

From a Clinic of Prof. Mussey, at the Commercial Hospital, Cincinnati, May 29, 1843.

THE art of restoring lost parts is said to have had its origin in India, where mutilations by law, as a penalty for crime, have been practised from a remote antiquity. This art was concealed with great care, and, whether it found its way into Egypt, as reported by Galen, or whether it was known at all by the Greeks and Romans, does not clearly appear. In the 16th century, Taliacotius, an Italian physician, distinguished himself by his skill in repairing mutilated noses; but the operation was rarely performed by other European surgeons, until within the last half century. Mr. Carpue, an English surgeon, thirty or forty years ago drew the attention of the profession to this subject by the success he met with in some operations upon the nose. More recently, Germany and France have contributed much to this department of the profession, while England has not been an idle spectator of the progress made by her neighbors. Graefe, Dieffenbach, Zeis, Dupuytren, Velpeau, Roux, Delpech, Liston, with some others, by their successful labors have given to the profession much valuable information respecting the relief, not only of native deformities, but the restoration of parts lost, or rendered useless or hideous

\* Calculated from Dalton, who found the perspiration in March to amount to 37 ounces. Total weight, 140 pounds.

† According to Lavoisier and Seguin, who state the amount of perspiration as 51 ounces daily. Here, also, the total weight=140 pounds.

by casualty or disease. Our own country, too, claims to have done something worthy of mention in this province of our art. Some fifteen or twenty years ago, a surgeon near Boston, in an attempt to form a new nose, was partially successful. The patient was vain enough of the lump that had been added to his face, although it looked as much like a wen as it did like a nose. Within the last eight or ten years, Dr. J. M. Warren, of Boston, has accomplished some brilliant operations; and more recently, Drs. Pancoast and Mutter, of Philadelphia, have done themselves great credit in plastic surgery.

From the time of Taliacotius to that of Carpue, and even later, the epithet, *Taliacotian*, was applied to the operation of repairing the mutilated nose; and, until a period still more recent, plastic surgery was almost exclusively limited to this single operation. The nomenclature of Zeis is, I believe, more generally adopted, which gives a term, made from two Greek words, the one signifying to mould or form, while the other is the name of the part formed or restored. Thus we have *rhinoplasty* for these operations upon the nose, *cheiloplasty* for those of the lips, and *blepharoplasty* for the eyelids.

The patient, Mary Roney, æt. 40, who has been just before you, had, as she alleges, when a small girl, a burn upon her face, which left a bad scar and contraction of the right cheek and lower eyelid. This threw the eye constantly a little open, giving a hideous stare to the expression, exposing constantly to the air a part of the lower ocular conjunctiva. On the first of last month, April, I attempted to remedy this deformity by an operation, which some of the gentlemen present had an opportunity of witnessing. The cicatrized and contracted skin was cut through, and a portion of it dissected out. The tarsal edge of the lid, not having been destroyed, but only bent and puckered at the middle, was raised up and straightened, and allowed to remain. A patch of skin from the temple, larger than the space exposed by the removal of the cicatrix, was dissected up, and still attached by a pedicle a quarter of an inch in diameter, was applied to the exposed surface, and secured by stitches at the distance of half an inch from each other. Adhesion took place, and in a few days the patch was firmly implanted in its new situation. The pedicle adhered at its upper edge, but formed a small pouch at its lower edge by projecting over sound skin. The cuticle of this was removed by nitrate of silver, and the whole pedicle, without being divided, in a short time was identified with the surrounding integument. A difficulty still remained. The skin taken from the temple, being considerably thicker than the natural skin beneath the eye, gave a clumsy appearance to the new eyelid. This has been obviated by keeping a compress bound upon it for some weeks. Now the new skin is on a level with the surrounding parts, and applies itself very well to the eye. The color, you perceive, of the new eyelid is paler than that with which it is connected at its lower and nasal margin, and it is doubtful whether it will acquire the precise hue of the scarred and bronzed surface in its neighborhood, without the aid of a little rouge, or some other pigment, which we should pardon Miss R. for resorting to, when she comes into the world again to exhibit her new and placid physiognomy.

The case of cheiloplasty in the person of John Barnes, who was operated upon for scirrhus of the whole lower lip, last October, is familiar to most of you. It was reported in a late No. of the *Lancet*. Barnes has just been re-admitted into the Hospital, not on account of the new lip, for that remains sound, and serves well to retain the saliva, and to aid in the articulation of labials, but for an ulcer below the angle of the jaw, which is the sequel of a rapid induration at that point. The ulcer has a malignant appearance, and the induration at its base seems to be rapidly extending. The prognosis is unfavorable.

Some few of the gentlemen present recollect the case of rhinoplasty we had in this Hospital a little more than four years ago. John Cotter, about 30 years of age, was the patient. He had lost the whole of his nose by ulceration, two years before. After two weeks preparation upon a farinaceous diet, he underwent the operation, which consisted in raising a flap from the upper arm, attaching it to the face by the interrupted suture, and securing the arm by Graefe's apparatus. The flap adhered well, and was detached from the arm in ten days, and a tolerably good substitute for a nose was the result. But the ensuing winter, in the State of Indiana, Cotter, addicted as he had long been to liquor, took too much, lay out one night and froze off his nose. The following spring he came to this city and re-entered the Hospital. Another attempt was made to supply the loss by a flap from the arm. This was unsuccessful; partly I believe from his not being duly prepared for the operation, and partly from the arm not having been kept secured against all motion. The following winter he came again to the Hospital for another trial, and after having a preparation for several weeks, objected to undergoing the operation in presence of the class of students at that time in attendance, left the Hospital and took private lodgings.

The operation was performed early in February, 1841. The flap was taken from the forehead. The next day the parts appeared well, but on the third day the face was attacked with erysipelas, and almost one vertical half of the flap sloughed, while the rest adhered. After this had become sufficiently consolidated, I took another flap from the forehead and attached it to the first, near the median line. This adhered throughout, and the whole in due time became solid, with the columna firmly implanted upon the base of the upper lip.

It was not until some weeks after the operation, that I was able to explain the accession of erysipelas on the third day, and which had well nigh frustrated the object altogether. From a member of the family, I learned that the patient, on the day of the operation, and the day following, drank spirit somewhat freely, furnished him by his old companions, whose sympathies were manifested in a way which he knew not how to resist. After the completion of the cure, he was induced to sign the pledge of total abstinence from all intoxicating drinks, which pledge I believe he has faithfully kept. He called on me a few weeks since, and assured me that he had not in a single instance violated his temperance engagement, which statement the appearance of his face confirmed. His nose is sound, sufficiently voluminous and prominent, and looks enough

like a nose to pass respectably ; for, amidst the endless diversity of form in this important feature of man's face, almost no variety can be imagined, which has not its prototype somewhere in the multitude.—*Western Lancet.*

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#### CASE OF HEMIPLEGIA.

[DR. J. M. FOLTZ, Surg. U. S. N., relates the following case in the first No. of the New York Journal of Medicine. It occurred in the U. S. Naval Hospital at Mahon.]

One of the most important cases under treatment at this time, was that of Assistant Surgeon Van Wyck, who was affected with hemiplegia. As we had but a short time previously met with several of the cases of Mr. Turnbull, in London, in which the use of the strychnine was attended with benefit, we eagerly embraced this opportunity of prescribing this article ; and from the youth and general good health of the patient, we entered upon the treatment, sanguine of success. The patient was 21 years of age, and had just entered the navy after a collegiate course, in which he had carried away the highest honors ; and from his devotion to his profession, he promised much future usefulness. Within twenty-four hours of sailing from New York, he was seized with paralysis of the left side, which also deprived him of the powers of articulation. Three months elapsed from the time of being paralyzed, until he came under our care. From the time of the attack he had been subject to violent epileptic convulsions, which returned periodically, at intervals of about a fortnight. For this he had been copiously bled, which for the future was avoided as much as possible ; and it was found that arresting the circulation in the extremities by means of a tourniquet, would seldom fail to put a stop to the convulsions, which is a method of treatment that we have practised with much success in the epilepsy of seamen—a class of men who are very obnoxious to this disease. We have recently seen it mentioned in the European journals, that pressure upon the carotids will seldom fail to arrest epileptic convulsions ; and from the benefit which we have so frequently witnessed, from pressure upon the arteries of the extremities, we could confidently anticipate the best results from interrupting the circulation in the carotids, in those cases in which there is so great a determination to the brain, as frequently to cause the production of lesions and effusions. The strychnine was ordered in solution, commencing with one-sixteenth of a grain, *ter in die*, and the paralyzed side was bathed once a day with a solution of nux vomica. The dose was gradually increased until one third of a grain was taken, when spasms and involuntary muscular contractions took place in the paralyzed limbs. This manifestation of the influence of the medicine was hailed as a favorable symptom, and its use was now diligently persevered in, with the effect of increasing the spasmodic action to a great extent ; but no additional voluntary motion was acquired. At the termination of eight weeks' use of the strychnine, as the convulsions

became very violent, and the symptoms presented indications that the system was suffering from the medicine, its use was discontinued; and hereupon these unpleasant symptoms gradually disappeared. At intervals, for several months, the strychnine was ordered in various forms, and in smaller quantities, but without any favorable result. A seton in the nape of the neck was of service; and after restoring his general health, he ultimately embarked for the United States in charge of his relatives, who encountered all the difficulties of a voyage to the Mediterranean, to restore him again to the family circle. In this case, as well as in the numerous instances in which the strychnine was administered among the natives, the favorable consequences did not follow which were met with in the hands of Mr. Turnbull.

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#### DIETARIES FOR CHILDREN.

From Dr. Pereira's new Work on Food and Diet, Dr. Lee's Edition.

In children the function of nutrition is more active than in adults. They have not merely to repair the daily waste, that is, to renovate their tissues, but to grow. Their functions of circulation and respiration are, therefore, more active than in after life; and they require food; that is, substances to support the process of respiration, to be administered at shorter intervals.

There is also another reason why in children the elements of respiration (non-nitrogenous foods) are more necessary than in adults. In the former the transformation or metamorphosis of the existing tissues is less intense than in the latter. In an adult, who neither gains nor loses in weight perceptibly from day to day, the nourishment and waste of organized tissue are equally balanced; but in the young the weight augments daily, and, consequently, the nourishment must exceed the waste. In order that this may take place, the child must be supplied with a sufficient quantity of non-nitrogenous food, which, by yielding carbon and hydrogen to be burnt in the lungs, protects the organized tissues from the transformations consequent on the injurious action of oxygen. "What is wanting for these purposes an Infinite Wisdom has supplied to the young animal in its natural food. The carbon and hydrogen of butter, and the carbon of the sugar of milk, no part of either of which can yield blood, fibrin, or albumen, are destined for the support of the respiratory process, at an age when a greater resistance is opposed to the metamorphosis of existing organisms; or, in other words, to the production of compounds which in the adult state are produced in quantity amply sufficient for the purpose of respiration. The young animal receives the constituents of its blood in the caseine of the milk. A metamorphosis of existing organs goes on, for bile and urine are secreted; the matter of the metamorphosed parts is given off in the form of urine, of carbonic acid, and of water; but the butter and sugar of milk also disappear; they cannot be detected in the feces. The butter and sugar are given out in the form of carbonic acid and water, and their conversion into oxidized products furnishes the clearest proof that far more oxygen is absorbed than is required to

convert the carbon and hydrogen of the metamorphosed tissues into carbonic acid and water. The change and metamorphosis of organized tissues going on in the vital process in the young animal, consequently yield, in a given time, much less carbon and hydrogen, in the form adapted for the respiratory process, than corresponds to the oxygen taken up in the lungs. The substance of its organized parts would undergo a more rapid consumption, and would necessarily yield to the action of oxygen, were not the deficiency of carbon and hydrogen supplied from another source."—*Liebig*.

Children, for the most part, evince an almost instinctive fondness for sugar, which is supplied to them in their mother's milk. This perhaps is to be explained by the fact that it is an element of respiration, and, therefore, is more necessary for them than adults, on account of the greater activity of their function of respiration. But this fondness for sugar is by no means universal among children. In very cold countries, substances richer in carbon and hydrogen, and, therefore, yielding more heat by combustion, are preferred. "In one of those late extravagant voyages to discover a north-west passage," says Sir Anthony Carlisle, "the most northern race of mankind were found to be unacquainted with the taste of sweets, and their infants made very wry faces, and sputtered out sugar with disgust; but the little urchins grinned with ecstacy at the sight of a bit of whale's blubber."

The natural appetite I believe to be an index of the wants of the system; and ought, therefore, to be consulted, to a certain extent, in the dieting of children; and I believe that parents commit a gross error who totally disregard it. I have seen children refused vegetable food, though they ardently desired it, because they would not eat what their nurses supposed to be the proper proportion of animal food; and, on the other hand, I have known children denied animal food, on the mistaken notion that it would be injurious to them, though the digestive functions were active, and the appetite for meat most keen.

Arrow-root, tapioca, sago, potato starch, *tous-les-mois*, sugar, butter, and other fatty bodies, are elements of respiration, and if used in greater quantity than is necessary for combustion in the lungs, they contribute to the increase of fat; but they do not contain the necessary ingredients for the growth of bone, cartilage, ligament, muscle, membrane, and cellular tissue. For the latter purpose, nitrogenized food is necessary. The caseine or curd of milk is an aliment of this kind, supplied by nature, for the use of mammals. It is a proteinaceous substance, adapted for the growth of the organized tissues; and is accompanied by phosphate of lime, which is necessary for the solidification of bone. The cereal grains (as wheat, barley, oats) also yield most valuable nitrogenized foods for children.

The uses of animal foods (meats) have been so fully described, that any further reference to them is unnecessary here.

Children may be over fed or under fed. Instances of the former, however, are comparatively rare. Of the ill consequences of defective nutriment we have, unfortunately, too many instances continually presented to

our notice. Irritable bowels or diarrhoea, tumid abdomen, mesenteric disease, wasting, and fever, are the ordinary and obvious effects. They frequently follow the continued use of pea-soup and potato stews,—dishes which are in common use at poor-houses and other establishments for pauper children. Scrofulous and strumous diseases, marasmus, rickets, distortions, and pot bellies, so commonly met with among children of the poor, are referable, in part at least, to food defective either in quantity or quality, or perhaps in both. I think it will be found that more than two thirds of pauper children are strumous. They derive this condition in part, perhaps, from hereditary tendency; but partly also, as I believe, from defective nutriment. To the same cause also is ascribable their inferior development. If the children in poor-houses be examined, they will be found, for the most part, smaller and shorter for their age, more frequently distorted, and more readily fatigued, than the children of the middling and higher classes.

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## ABSORPTION—SECRETION—THE SPLEEN.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—It must have been observed, by every one, that when a piece of sponge or any other absorbing substance is immersed in a mixture of different liquids, it takes up the entire mass without the slightest separation of the constituents of the mixture. If a piece of sponge, for instance, is immersed in a mixture of vinegar and water, it takes up the whole mixture; and if the mixture is pressed out again, it presents no separation of the two liquids of which it was composed. If absorbing substances are immersed in mixtures of any other liquids, as milk and water, or wine and water, the result is the same. If a sponge is immersed in blood while in a liquid state, the entire mass is taken up, without the slightest appearance of a separation of the component parts of the blood. Some mixtures of liquids and fluids separate of themselves by the force of gravity, as oil and water, quicksilver and oil, &c.; but the power of absorption, merely, has no tendency to separate the parts, even of a mixture of liquids; much less to produce a chemical decomposition of a liquid or solid substance.

Secretion, on the contrary, produces a decomposition of the substances upon which it operates. This fact is illustrated in the secretions of the urine, the bile, the tears, the mucus, the milk, &c.

The lacteals are commonly called *absorbent vessels*, yet these vessels manifest an entirely different power from absorbing substances. No absorbing substance placed in the small intestines would separate the chyle from the mixed mass of liquids and solids contained in that portion of the digestive organs. The lymphatic system is called the *absorbent system*, but the lymph is a chemical production from the blood, in the elaboration of which, the power of absorption must appear entirely insufficient. When blood is extravasated, a tumor discussed, or a scirrhous dissipated, it is said to be absorbed; but all these effects must be accomplished by the

power of secretion. The lacteal system is therefore a secretory system. The lymphatic system is also a secretory system. The secretory power is to the animal system what the power of gravitation is to bodies in general, the basis of all its motions, the great agent in the removal of all the old parts and the composition of all the new.

I have given this illustration of the difference between the power of absorption and the power of secretion, to show that the venous blood is a secretion from the arterial blood. The venous blood is a *chemical* production from the arterial blood. It differs from the arterial blood not only in color, but in vital properties. The arterial blood supports life; the venous blood, when it circulates through the brain, destroys life. These two fluids are to be sure both called blood, but in my opinion they differ from each other too materially to be called even by the same name. If, then, there is a chemical difference between the venous and the arterial blood, this difference can only be produced by the power of secretion. The common supposition is that the secretions in general, the urine, the bile, &c., are separated from the arterial blood, and that the venous blood is the remaining part. This may be true; or, it may be the reverse, that the venous blood is secreted first from the arterial blood, and the other secretions constitute the remainder. In effect it amounts to the same thing. The menstrual discharge in women furnishes an instance of a *sanguineous* secretion. It shows that the venous blood may be a secretion as well as the other fluids of the body.

In a former essay I contended *that the office of the spleen was the secretion of venous blood*. This function is plainly deducible from its organization. The spleen exhibits no other secretion but venous blood and coagulable lymph. The lymph is common to all the other organs except the brain, and consists of a quantity altogether insufficient to constitute the office of an organ circulating so much blood as the spleen. Indeed, that the office of the spleen is *the secretion of venous blood*, is just as demonstrable as that the function of the kidneys is to secrete urine, or that the function of the arteries and veins is to circulate the blood. Contemplated aside from conjecture, the organization of the spleen points us to no other possible function than the secretion of venous blood. The final cause of the function of the spleen it is not necessary to know, in order to demonstrate the existence of that function. We are chiefly concerned to know in what manner an organ deviates from its normal state, and how that deviation affects the system at large.

The spleen is undoubtedly subject to all the affections and diseases common to other organs. Suppose the spleen to be subject to an irritation similar to that of the uterus in menorrhagia; the consequence must be, the secretion of an extraordinary quantity of venous blood. This extraordinary secretion must disturb the balance of the circulation, and deprive the other organs of their natural supply of arterial blood, since what passes through the spleen cannot reach the other organs. Debility, faintness, and paleness of the skin, must ensue. The uterus secretes, periodically, a particular quantity of blood, but when the secretion becomes profuse, paleness of the skin, debility and faintness, are sure to follow, and in the end the whole train of nervous symptoms. When the

secretions of the other organs become profuse, similar results follow. The secretions of the liver, the kidneys and the lungs, often become so profuse as, in time, to destroy life. Life, I conceive, often wastes away by the extraordinary quantity of blood secreted by the spleen.

The lungs constitute the excretory organ to the venous system. The excretion of the venous system consists of carbonic acid and watery vapor. The carbon alone, in a healthy person, amounts to twelve ounces avoirdupois in twenty-four hours. In case an extraordinary quantity of venous blood is secreted by the spleen, the superfluous part of this blood must either pass out of the lungs in the form of carbonic acid and watery vapor, or pass through the lungs without that vital change produced by the oxygen of the air; or else respiration must be increased sufficiently to meet this new demand. In either case the lungs must have an extraordinary duty to perform, to say nothing of the change produced in other parts of the system. Suppose that in the ordinary normal state of the spleen, one-hundredth of the arterial blood to circulate through the spleen, and that by an enlargement of its vessels or an acceleration of its action one-twelfth of the blood should be diverted to that organ; and in both cases, suppose that there is twelve ounces of carbon, besides the oxygen in combination with the carbon and the watery vapor, excreted by the lungs in every twenty-four hours—there is, in the last case, one ounce of carbon secreted by the spleen alone, in twenty-four hours, and excreted by the lungs, as one-twelfth of the arterial blood passes through the spleen. The other organs and parts of the body, then, secrete about seven drachms less of carbon than in a healthy state of the spleen. On a superficial view of an increase of secretion by the spleen, it might seem to imply no serious injury to the system in general, as no blood appears to be lost; but I think we have only to look to the difference between the venous and arterial blood, and to the function performed by the lungs, to convince us that serious changes must be wrought in the system at large, by the secretion of an unnatural quantity of blood by the spleen, which cannot reach the general circulation. In the menstrual discharge, blood is secreted without any collateral secretion. A change of affinities apparently takes place in the blood without the secretion of anything from it. Such a change of the arterial blood may be effected by the vessels of the spleen. It does not appear necessary that anything should be secreted from the arterial blood, to destroy its vitality, or to change it into venous blood; all this may be performed by a change of affinities among the principles of the blood in the vessels of the spleen. Such, in fact, appears to be the case.

Two important points might be ascertained with respect to the function of the spleen, by experiments. In the first place, the velocity of the blood in the splenic vein might be compared with the velocity of the blood in other veins, by tying the vein in a dog, and then puncturing it. In the second place, it might be ascertained whether the venous blood of the spleen coagulates, like the blood in general. Both these experiments would throw some light upon the part which the spleen acts in the general economy.

The ancients, who were great observers, supposed hypochondriacism to be seated in the organs of the spleen and liver, and especially in the spleen. The prominent symptoms of this disease are such as might be attributed to an extraordinary secretion of venous blood by the spleen. These symptoms are, a great depression of the spirits, paleness of the skin, fainting fits, and frequently a sense of dying. An enlargement of the spleen and a tenderness in that region are a common sequel to intermittent fevers, and are accompanied with symptoms very nearly resembling those of hypochondriacism, viz. a bloodless skin, lassitude, faintness, shortness of breath and depression of the spirits. People, just before fainting, commonly experience an indescribable feeling in the left hypochondrium, in the region of the spleen, a further evidence that fainting may be produced by an extraordinary secretion of the spleen. In examinations of the spleen after death, particular attention should be paid to the size of its vessels.

D. B. SLACK.

*Providence, August 14th, 1843.*

## THE BOSTON MEDICAL AND SURGICAL JOURNAL.

AUGUST 23, 1843.

*Medical Schools of the West.*—Kentucky and Ohio have ample provisions for educating medical practitioners. The cities in which some of the schools are located, have manifested a liberality in facilitating the important business of medical instruction, that is truly surprising. In the State of Kentucky there are two institutions, which are of an elevated character, and having a large number of students. Although they may be regarded as rivals, there appears to be none too much effort, nor any too much machinery in motion to meet the demands annually made upon them by throngs of pupils from the southern and western States. The one at Lexington, an important appendage of the Transylvania University, has the advantage of having been a long time known to the public. The faculty are familiar with their duties, and devoted to the best interests of those who matriculate there. In surgery, particularly, Dr. Dudley has distanced all others in that region. It is no small matter to have performed lithotomy *one hundred and seventy-eight times*, almost without the loss of a patient. In lecturing, he is represented to be both interesting in manner and always instructive. A reputation like Dr. Dudley's would uphold a pretty poor school, against the rising influence of another within the compass of his surgical doings, even were he not sustained by associates of equal calibre. The chairs, however, are represented to be ably filled.

At Louisville, on the Ohio river, in the same commonwealth, is another school of medicine, unrivalled for energy, and unsurpassed for beauty of location, and the architectural symmetry of the building. It was the exclusive creation of the citizens, who were unsparing in their efforts to make the Medical Institute superior to all other institutions in the west. The inte-

rior conveniences, therefore, embrace whatever was considered an improvement any where else. The lecture rooms, anatomical theatre, and especially the chemical laboratory, in some respects distance all others in this country. To these are added a vast number of articles, that collectively make a museum. There is also a costly library, not kept for show, but accessible to all the students, and the whole is placed under the vigilant control of a young, ambitious faculty, admirably fitted, both by constitution and circumstances, for maintaining their ground against any combined force. Dr. Gross is widely known for his researches in pathological anatomy, and also for his achievements in operative surgery. Drs. Dudley and Gross, it is presumed, divide between them a large part of the heavy surgery of Kentucky. There are other eminent operators, but not connected with either institution. It is unnecessary here to advert individually to the gentlemen connected with Dr. Gross in the Louisville school, since their names are as familiar as their attainments are honorable to themselves and the country in which they live.

At St. Louis, Missouri, is a school. Little more is known of it than that it is organized and prepared for a regular system of instruction. Although St. Louis may be destined to outstrip all the river cities, a doubt is expressed in regard to the over-turning and swallowing-up tendencies of its present medical school. This is not an expression based upon personal knowledge, but emanates from those supposed to be conversant with whatever belongs to it.

Cincinnati has now but one medical school, which must live and thrive. Thrift, in this case, does not mean a dividend of profits, but the attainment of an honorable name that must command the respect of all men who have learned the value of skilful physicians and surgeons in a community. The present faculty, with Dr. Mussey at its head, will sustain the college, as it always has, with zeal tempered by discretion. Cincinnati is a good place to study medicine in, since its advantages are very similar to an extensive seaport. The Commercial Hospital furnishes specimens of every thing in the way of surgical practice, from trivial accidents to the severest operations. Besides valuable cabinets belonging either to the members of the faculty or the college itself, the museum of morbid anatomy is perhaps one of the richest in the States. Instead of being in a condition to be sold or carried from the city, the State should own the collection and keep it choicely for the benefit of its own people.

Willoughby University Medical School, also in Ohio, was thought to be favorably working its way into public favor, with an encouraging number of students from year to year; but those who understand managing the screws are about transporting it to another and possibly better location. So Willoughby may be considered at the present moment in a state of transition.

The medical institutions, therefore, of Lexington, Cincinnati and Louisville, are bright shining lights in the west, where the true principles of medicine and its collateral branches are taught with as much advantage as in any of the old schools of the Atlantic States. As the great west increases in population, these excellent institutions will increase in wealth and importance. They will by and by outstrip all others in the number of their attendants on the annual course of instruction, and will exercise an increasing influence on the medical character of the United States. St. Louis is not to be wholly lost sight of, since there is a centripetal force

operating, silently, but surely, that will probably make it the London of the west. Whether science can be equally encouraged there, remains to be ascertained.

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*Treatise on Food and Diet.*—Dr. Pereira's new work, edited by Dr. Chas. A. Lee, of New York, to which reference has before been made in this Journal, has just been published in that city by the Messrs. Langley. The author and editor are both so well known that it is needless to occupy much space in speaking of their labors, especially as the price of the work is so low (\$1.00), and its value so undoubted, that most of our readers will probably peruse it for themselves. One or two extracts from it will be found in this No. of the Journal; and we take the liberty also of copying part of Dr. Lee's Preface. Many of his additions we shall be glad to copy from the Appendix in future numbers.

"In complying," he says, "with the request of the Author of the following work, to make such additions as would better adapt it to the wants of the American reader, it was far from my design or expectation to extend my remarks so far, or to comment on such a variety of topics. The subject of 'food and diet' is, however, so extensive, embracing such a multitude of facts, and not a little of theory, as to embarrass by its very copiousness,—so that the chief difficulty of one who enters upon this boundless field, is, to know where to begin, and when to stop. My object has been, chiefly, to notice those topics upon which additional information would, perhaps, be considered desirable by the American reader; and, while I left the text entire, to offer such brief comments as some reading and reflection would naturally suggest. This plan was also in accordance with the wishes of the publishers. Such notes, therefore, as have been added, will be found either at the bottom of the page, or in the Appendix. With respect to the merits of this treatise, it is scarcely necessary for me to speak. It fully meets a desideratum which modern discoveries, the improvements in practical and experimental physiology, and especially the late achievements in analytic chemistry, have created; and which, since the appearance of Liebig's remarkable works, every one must have felt could not long remain unsupplied."

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*Powerful Counter-irritation—Long Issue on the Calvarium.*—The Provincial Medical and Surgical Association, in England, have published a series of volumes which have appeared from time to time, and have been called the Transactions of the Society. The eleventh volume has just issued from the press in London, and, like those which have preceded it, is filled with a good variety of useful practical matter. The principal object in noticing it at this time, is to call attention to that portion of it by Dr. Wallis, physician to the Bristol Infirmary, in which he gives an account of a method of using counter-irritation, which he states he has used extensively since 1828, when he became physician to the establishment above-named. It has not generally been adopted, however, he says, and as the reader will see it is not proper it should be, at the first onset of the disease, but has been reserved until ordinary remedies have been found unavailing. He gives cases of chronic meningitis, apoplexy and paralysis, epilepsy, hydrocephalus, &c., in which the remedy proved serviceable. We copy from the Medical Gazette Dr. Wallis's account of it.

"I have used this remedy in a great variety of cases of organic disease of the brain, both chronic and acute; in paralysis, impending effusions, convulsions, erysipelas of the head and membranes of the brain; in fever in the very advanced stages; in one case of hysteria, with very great advantage; and also in a case or two of mania. The general result of my experience of its use has been such as to confirm my favorable opinion of it, as being the most powerful and efficacious of all our remedies of the class of counter-irritants. Its effects are more permanent and its disadvantages are fewer than those of any other remedy now in use. The friends of the patient will occasionally object to it, from that misapplied feeling of affection which converts every energetic effort to save life, if the use of the scalpel be required, into an act of cruelty. This is an objection urged against many of our best, nay even our ordinary remedies, such as a blister or issue of the common kind. The resistance of the friends, however, is generally overcome by remarking quietly, that 'It is only intended to make an issue;' an insignificant trifle compared with the distressing effects of disease."

The circumstances necessary to attend to in carrying the remedy into effect, are these:—

"Let the head be shaved entirely, and have the patient brought near to the right side of the bed; raise the head by a hard pillow, and put a towel round his neck to receive the blood; let an assistant keep the head steady; at the same time draw the scalp downwards in all directions, so as to strain the calvarium as much as possible; the scalp will divide with so much more ease. In this, your own left hand will materially assist, by placing it at the upper and back part of the head, commencing the incision between your thumb and forefinger as far back as the lambdoidal suture; press the scalpel sufficiently down so as to *divide the scalp entirely through at once*; carry on the incision directly along the sagittal suture as far as the hair grows on the scalp, and which will cover the cicatrix after the issue is healed up. The length of the incision thus made will be in the adult about seven or eight inches; take care that the scalp be divided entirely and perfectly through, so that the edges of the incision will separate so far as to enable you to introduce a dossil of lint rolled up hard, as thick as two fingers, and which should be well soaked in spirit of turpentine; this answers the double purpose of increasing the effect of the incision, and makes suppuration come on earlier, and will usually assist in stopping a further loss of blood. The arteries very soon retract and cease to bleed; there is seldom more than six or eight ounces of blood lost, and this quantity may be very readily curtailed if it be desirable to do so.

"In those cases where depletion has been carried to a sufficient extent, prior to your determination to use this remedy, and the further loss of blood be inadvisable, it may be prevented in the following manner:—The instant the incision is completed, close the sides of the wound, and make pressure upon it with your hand, whilst your assistant hands the lint, well soaked in spirit of turpentine and rolled up firmly of a proper length, so as not to extend beyond the extreme length of the incision, as it would be inconvenient in strapping down the wound sufficiently to check the flow of blood; a little flour and dry lint may be superadded if necessary, but the dossil must not be made so thick as to rise much above the edges of the wound, or else the adhesive straps will not be secure, by being elevated, and thereby prevented from adhering near the edges of the incision.

Should the incision be imperfectly made, that is to say, not entirely through the scalp, the arteries might be only partially divided; in which case they will continue to bleed, notwithstanding the pressure you may have made: of course the arteries will require to be completely divided, to allow them to retract and cease to bleed."

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*Case of Presentation of the Belly.*—Dr. A. F. Holmes, of Montreal, relates a case of this very rare species of labor in the London Medical Gazette. The woman was at her full time, and had been in labor 24 hours, under the care of a midwife, when Dr. H. was called. The child was found dead, and the belly presenting, the body being doubled on itself. After administering three quarters of a grain of morphia, on attempting to turn the child, it was found that "instead of the body being simply doubled, it was also twisted, so that while the right side of the abdomen was opposite the vulva, the pubic region was turned in a contrary direction, and the elbow of the left side forced against it. Finding," says he, "I could not reach the feet or front of the thighs with my left hand, I withdrew it, and introduced the right, and having with much pain and difficulty reached the elbow, I found behind and below it the knee, and having insinuated a finger into the ham, held on during a pain, and endeavored in the interval to draw it down. I finally succeeded in bringing it into the vagina, and also the foot through the os externum. By gentle traction during the pains, the body was gradually extricated, the other leg and thigh remaining of course doubled up till the nates were expelled; the arms were brought down, but some delay occurred in the expulsion of the head, it being large." The presenting part was well marked by its purple color, and was found to be the right side of the abdomen. The woman died in thirty-six hours after delivery. Inspection of the body refused.

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*Extension in Fractures of the Spine.*—W. H. Crowfoot, Esq., surgeon to the Beccles Dispensary, England, details the case of a coachman, aged 42, in whom, from an external injury, the spinous processes of the ninth and tenth vertebrae were divided from each other considerably beyond their usual distance, the body of the ninth vertebra being forced forward, while that of the tenth projected backward. There was total deprivation of the power of voluntary motion and sensation in the lower extremities. A gradual but considerable extension was applied, and gentle attempts were made with the fingers to replace the bones. The deformity was in some measure removed by these means, but without the slightest return of voluntary power in the first instance. He was placed on his back on a firm bed, where he steadily improved, and at the end of three weeks could slightly move the great toe of the right foot; in a few days more this extended to the left foot. The power of the limbs now progressively but slowly returned, to such extent that he was able to resume his former occupations.

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*Animal Food.*—Many facts could be adduced to prove that an exclusive diet of animal flesh is amply sufficient for healthy nutrition. Sir Francis Head relates some interesting particulars respecting the Gauchos, inhabitants of the Pampas, in South America, which have an important bearing

on this question. After stating that they often continue on horseback day after day, galloping over their boundless plains, under a burning sun, and performing labors almost of an incredible description, he remarks:—"As the constant food of the Gauchos is *beef and water*, his constitution is so strong, that he is able to endure great fatigue, and the distances he will ride, and the number of hours he will remain on horseback, would hardly be credited." Sir Francis Head also brings his own personal experience in proof of the correctness of the above statement. "When I first crossed the Pampas," he remarks, "I went with a carriage, and although I had been accustomed to riding all my life, I could not at all ride with the Peons (drivers of the carriage), and after galloping five or six hours, was obliged to get into the carriage; but after I had been riding for three or four months, and had lived upon beef and water, I found myself in a certain condition, which I can only describe by saying that I felt no exertion could kill me. For a week I could daily be upon my horse before sunrise, could ride till two or three hours after sunset, and have really tired out ten or twelve horses. This will explain the immense distances which people in South America are said to ride, which I am confident could only be done on beef and water." There are numerous facts of a similar kind which might be quoted, but the fact that an exclusive diet of animal food is fully sufficient to sustain the physical powers, is too well established to need further proof.—*Dr. Lee's Appendix to Pereira's Treatise.*

*Medical Miscellany.*—Dr. Inman, of Liverpool, has been led to believe that syphilitic virus in the system is often the cause of hemiplegia.—Mr. McCash, surgeon, London, relates a case of simple fracture of the fore-arm, in which the too early application of the starched bandage was productive of very injurious consequences.—A person has lately been poisoned in Maine by the use of *blue flag root*.—A child was recently killed in Pennsylvania by the bite of a rattlesnake, death taking place in two days after the bite, the body and limbs swelling, it is said, to bursting.—It is expected that the mineralogical cabinet of the late Baron Lederer, Austrian Consul General to the United States, will be purchased by Yale College. It is said to be rich in American specimens.—One Caleb Rice, a Thomsonian, has been sentenced, after a trial of two days, to 30 days imprisonment and a fine of \$250, for causing the death of a Mrs. Keathly, of St. Charles county, Missouri.—"Scarlatina and its treatment on homeopathic principles," is the title of a new English work by Dr. Belluomini.—Part I. of Dr. W. B. Carpenter's Animal Physiology is published in London.

TO CORRESPONDENTS.—Dr. Nott's theory respecting Mulattoes, which was copied into this Journal last week on account of its having reference to a subject to which attention was first directed in our pages, has called forth a brief reply from a correspondent, which will be inserted next week.—Dr. Hayes's case of psoas abscess, and Dr. Welch's of uterine polypus, will also then be admitted.

DIED,—At Waterford, N. Y., Dr. Timothy Upham, 36.

Number of deaths in Boston, for the week ending Aug. 19, 45.—Males, 35—Females, 20. Stillborn, 5. Of consumption, 4—dropsy, 1—inflammation of the lungs, 3—cholera infantum, 5—marasmus, 2—infantile, 10—dropsy on the brain, 2—bowel complaint, 1—teething, 1—apoplexy, 2—fits, 2—brain fever, 1—croup, 1—drowned, 1—dysentery, 2—complication of diseases, 1—canker in the bowels, 1—typhus fever, 1—measles, 1—dropsy in the head, 1—hooping cough, 1. Under 5 years, 30—between 5 and 20 years, 3—between 20 and 60 years, 10—over 60 years, 2.

**Surgical Operation.** By H. Frost, A. M. M.D.—Jacob Jackson, of Tobacco Stick, Dorchester county, Maryland, a free colored man, 42 years of age, of a strong athletic frame, and more than ordinary height, of temperate habits and general good health, received an injury from an axe, on the vertex, over the frontal bone, and near the angle formed by the coronal and sagittal sutures. It seems that he was occupied, within the house, making an article for domestic use, and as he raised his axe it struck a beam over his head, and becoming entangled in a hank of yarn suspended from the beam, rebounded with great force, so as to cause a severe contusion, which (although it healed) was soon after followed by the most acute and lancinating pains about the orbital temporal, and even occipital region. The frontal and tempero-facial nerves, however, were more particularly implicated. He had been attended by three respectable physicians of the same county, whose treatment was various, but attended with only temporary relief, with no permanent benefit. In the month of January, 1843, Dr. Benj. B. Harrison, of Tobacco Stick, formerly of Martinsburg, Va., was called to the case, and while under his care, several remedies were employed, but to little purpose, until in the month of June, '43, Dr. H. determined to operate upon the patient; and accordingly in the presence of many of the neighbors, proceeded to make two straight incisions, at right angles, two and a half inches in length down to the bone, at the seat of the injury; and this was done, primarily, to settle the point as to there having been any fracture or depression of the bone in reality. The flaps were then dissected up, making bare the bone, which was evidently free from any lesion whatever. Further examination resulted in finding the adipose vesicles of the skin enlarged and in a morbid condition; which were accordingly clipped off or cut away to such an extent as not to leave any remaining seeds of disease. The flaps were then replaced, and suitable dressings were applied to the wound. The hemorrhage was not profuse, and no more than desired, and the patient appeared to be almost instantly relieved. Precautions were taken against inflammation, and a free use of poultices and anodynes, particularly Hoffman's. Means were used to keep the wound open, or in a state of discharge, as long as possible, or rather as long as there were matters to be discharged. In a little more than two weeks, however, it healed up, and the patient to all appearance became perfectly sound. He was injured January, 1842.

**Old Doctors.**—In the north and west every village has its old doctor—generally quite a respectable personage, with several peculiarities, and the self-complacency which comes from a life of usefulness, winding up amidst the regard of the neighborhood, and the respect of the younger physicians who surround him. A sage of this kind is almost unknown in the south-west, except by title, which often indicates about as much clinical labor, as that of colonel testifies to military achievement. The reason of this difference between the south-west and the more northern portions of the Union, is three fold: 1st. A great many physicians die young. 2d. A number go to cotton planting. 3d. Not a few marry rich widows. Thus it is that causes the most opposite conspire to deprive this quarter of the benefits of ripe medical experience. How long the first will continue with its past energy, we cannot predict; but the second will soon cease unless the price of cotton should rise above five cents a pound; the last, however, is of a permanent character, for six or eight times as many husbands as wives die in this region.—*Dr. Drake's Travelling Editorials, West. Jour.*